

Lake Park Boulevard Street Flooding Issues

In-depth City Council Meeting

October 10, 2019

Brian Stineman

Public Works Director



The Issue:

#1 Flooding of the street causes traffic and safety concerns during major rainfall events

#2 Flooding of houses at 723, 719, 715 Lake Park Boulevard during major rainfall events

English
Congregation Of
Jehovah's Witness

Lake Park Blvd

McArthur

Douglas St

Summit Ave

701

711

715

719

723

727

705

709

710

714

718

722

726

730

734

2008

612

200

1820

1816

1814

1810

1808

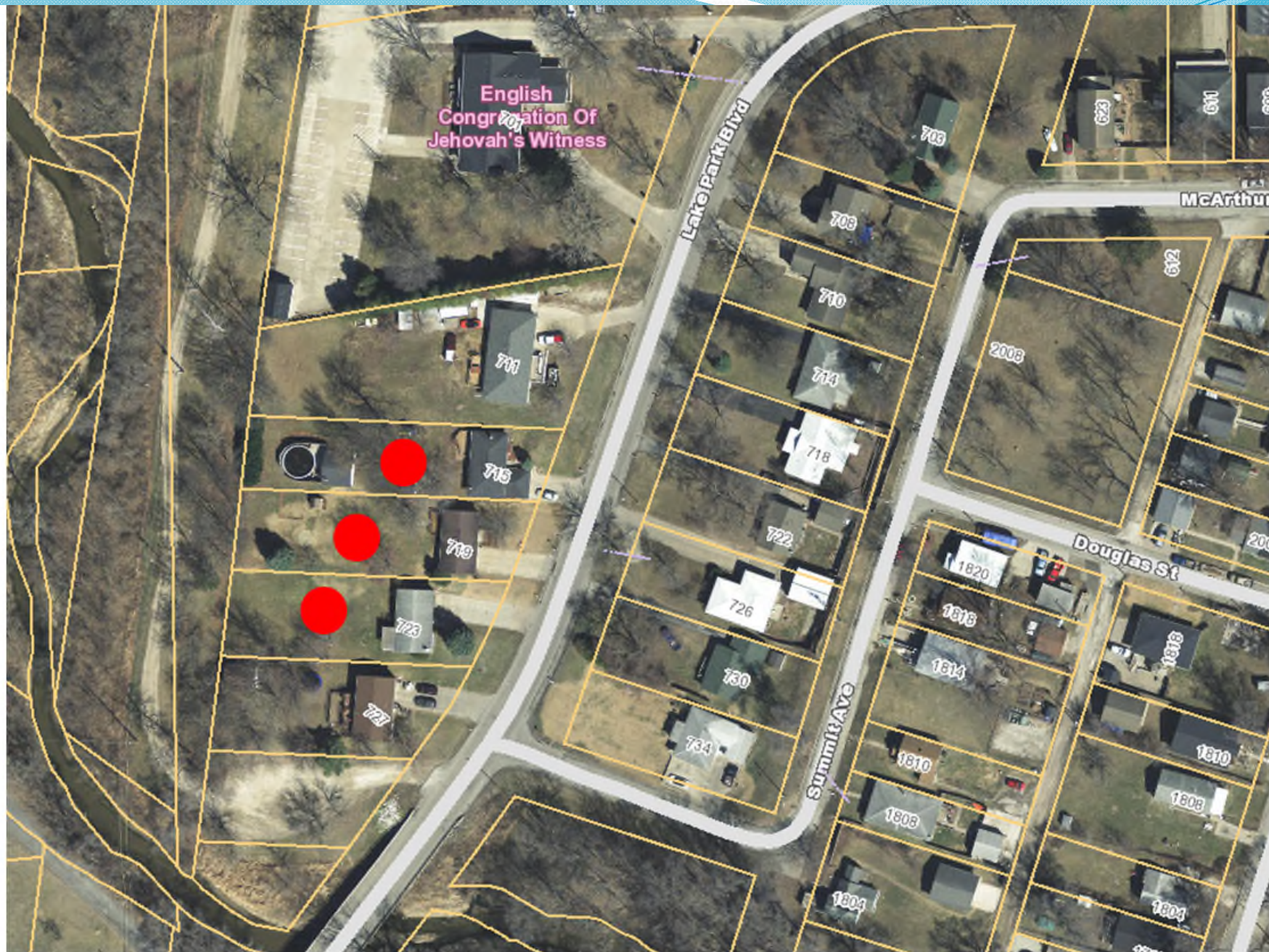
1804

1818

1810

1808

1804



English
Congregation Of
Jehovah's Witness

Lake Park Blvd

McArthur

1978-79

1960

Douglas St

Summit Ave



Historic Aerial Photo Project

Current Aerial: 1960

Basemaps Measure Map Info Help

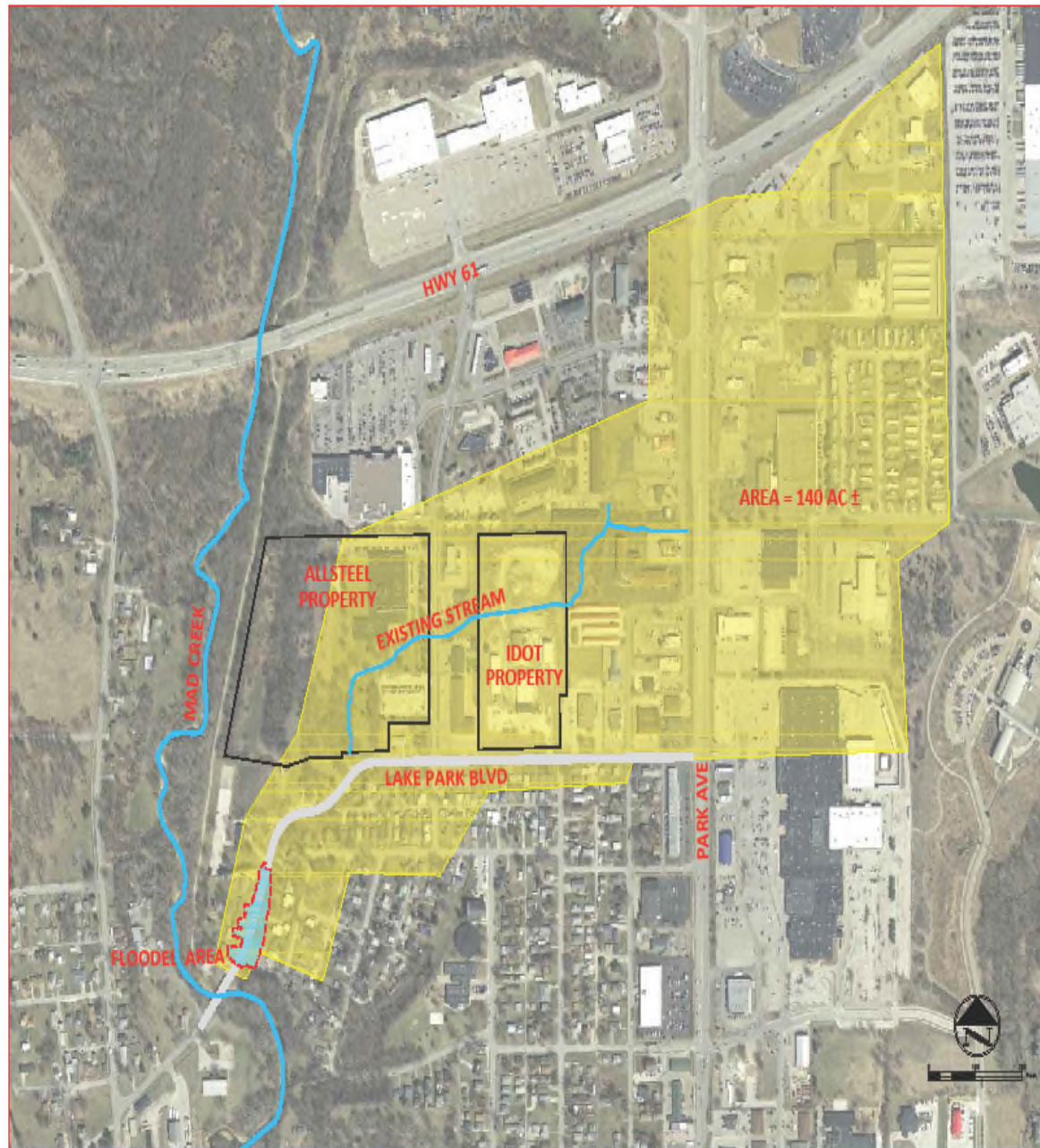


T95NR45W02 UTM Zone 15 NAD83 WGS84 664834.74, 4590577.96 -91.026621, 41.449867

Current scale = 1:4,513.99

EXISTING CONDITIONS:

- 140 AC± DRAINAGE AREA
MADE UP OF 2 PARTS:
 - * EX. STREAM (100 AC±)
 - * LAKE PARK BLVD STORM SEWER (40 AC±)
- FLOODED AREA FLOWS OVERLAND TO MAD CREEK DURING HEAVY RAINFALL.
- FLOODED AREA STAYS FLOODED FOR ABOUT 3 HOURS DURING A 100-YEAR STORM EVENT.
- FLOW IS ABOUT 550 CFS AT PEAK OF 100-YEAR STORM (200 CFS ARE IN THE 48" STORM PIPE)
- OPEN THROAT INLET CAN PASS 5 - 10 CFS.
- WOULD NEED 35 - 70 ADDITIONAL INLETS PLUS ADDITIONAL PIPES TO CARRY WATER TO CREEK.
- NOT ENOUGH ROOM.



Option 1

- Status Quo (do nothing)
 - Not every rain causes flooding
 - Should public funds be used for private property?
 - Estimated cost \$0.00

Option 2

- Acquire Property at 719 Lake Park Blvd.
 - Remove the house and build excess stormwater passageway.
 - Would not prevent street flooding
 - Would mitigate flooding of adjacent properties by lowering water levels
 - Cannot guarantee other properties won't flood during future major rainfall event
 - Estimated Cost \$351,000

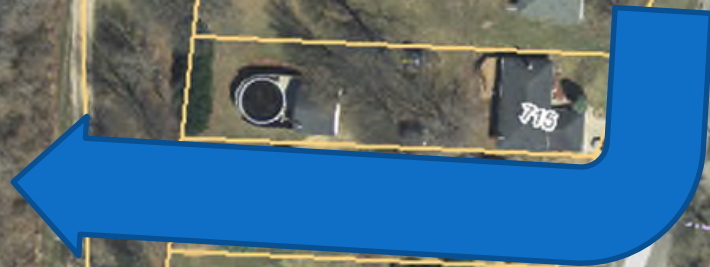
English
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McArthur

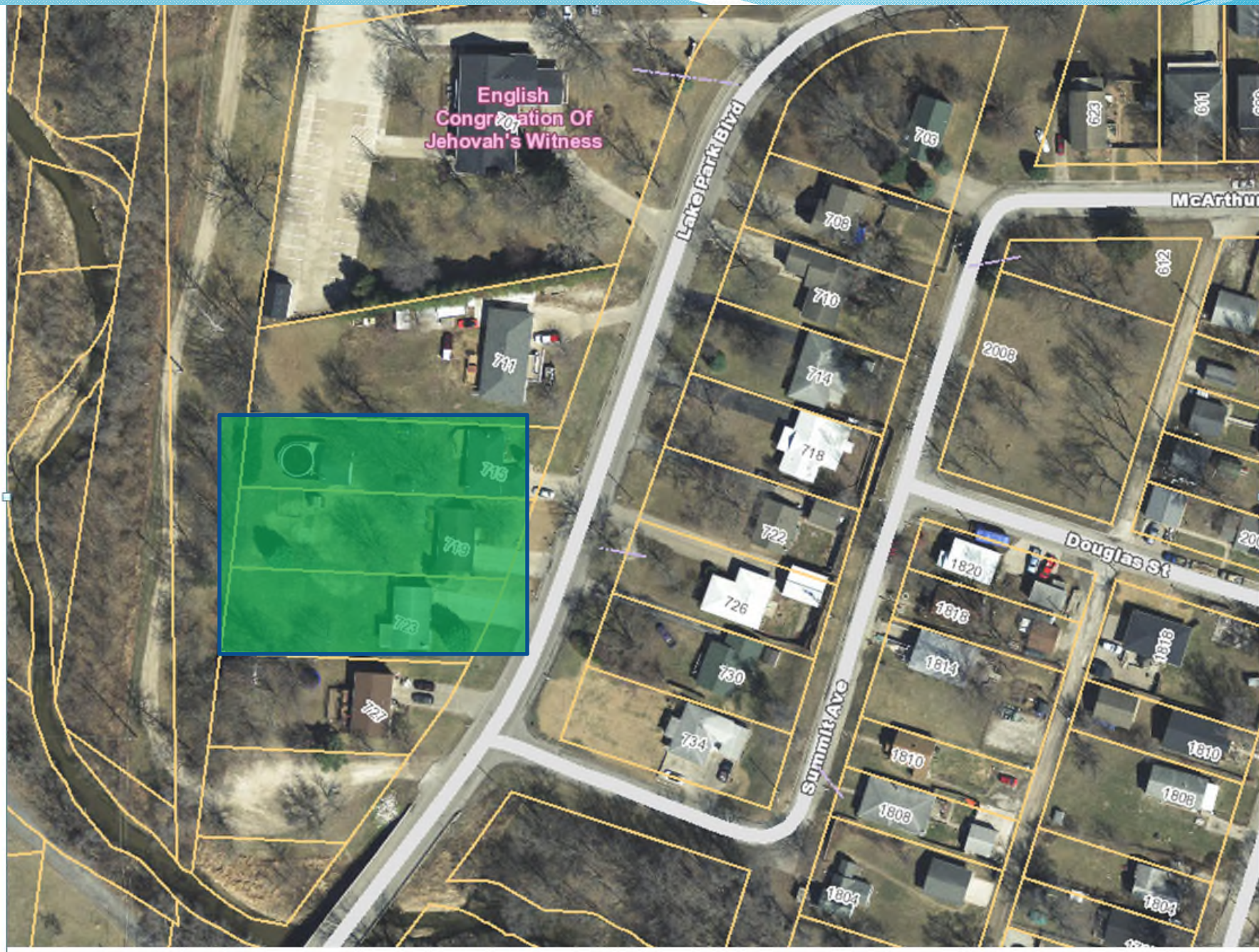
Douglas St

Summit Ave



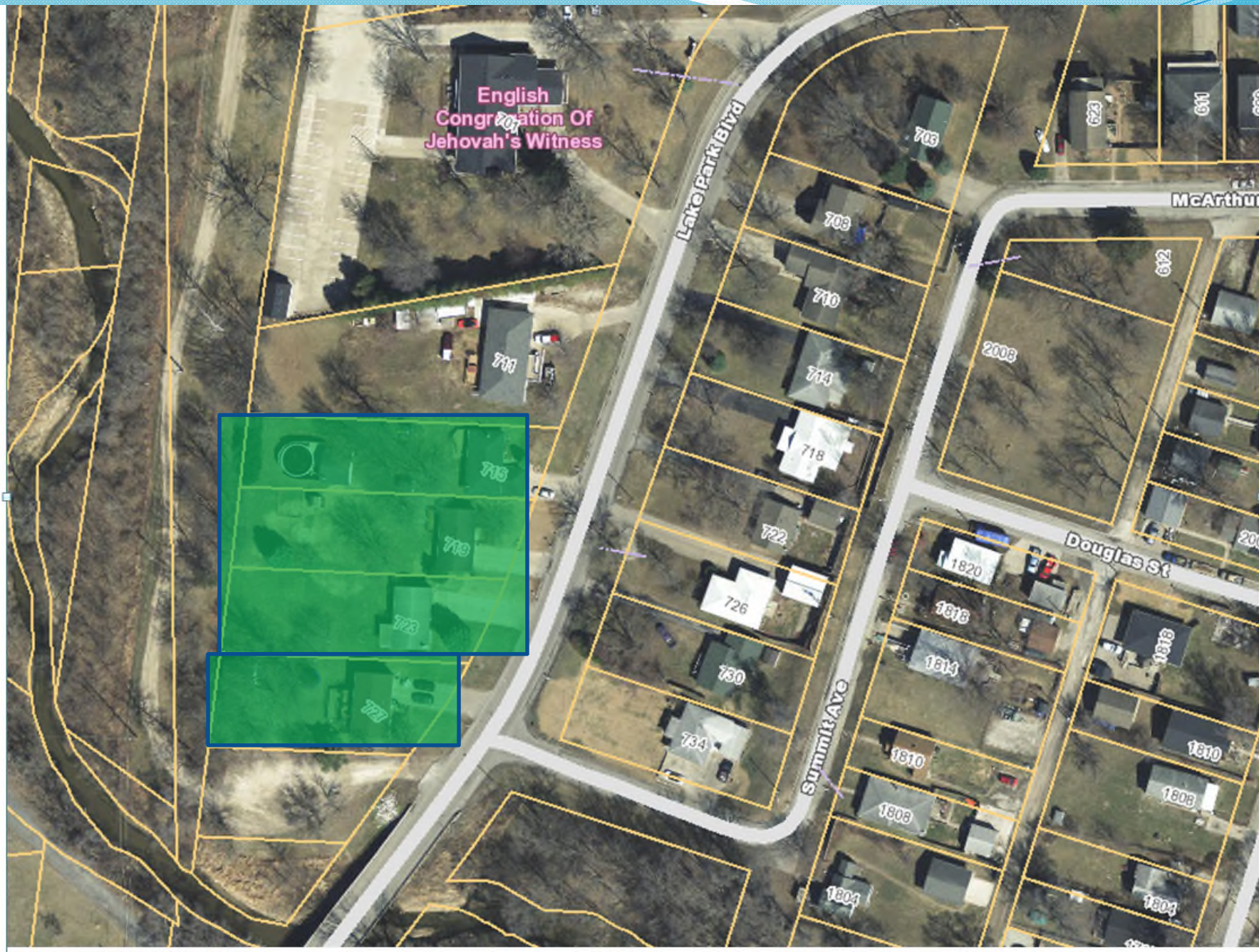
Option 3

- Acquire Property at 719, 715 & 723
 - Remove all three houses and build excess stormwater passageway.
 - Would not prevent street flooding
 - Would eliminate flooding of properties by eliminating houses.
 - Estimated Cost \$630,000



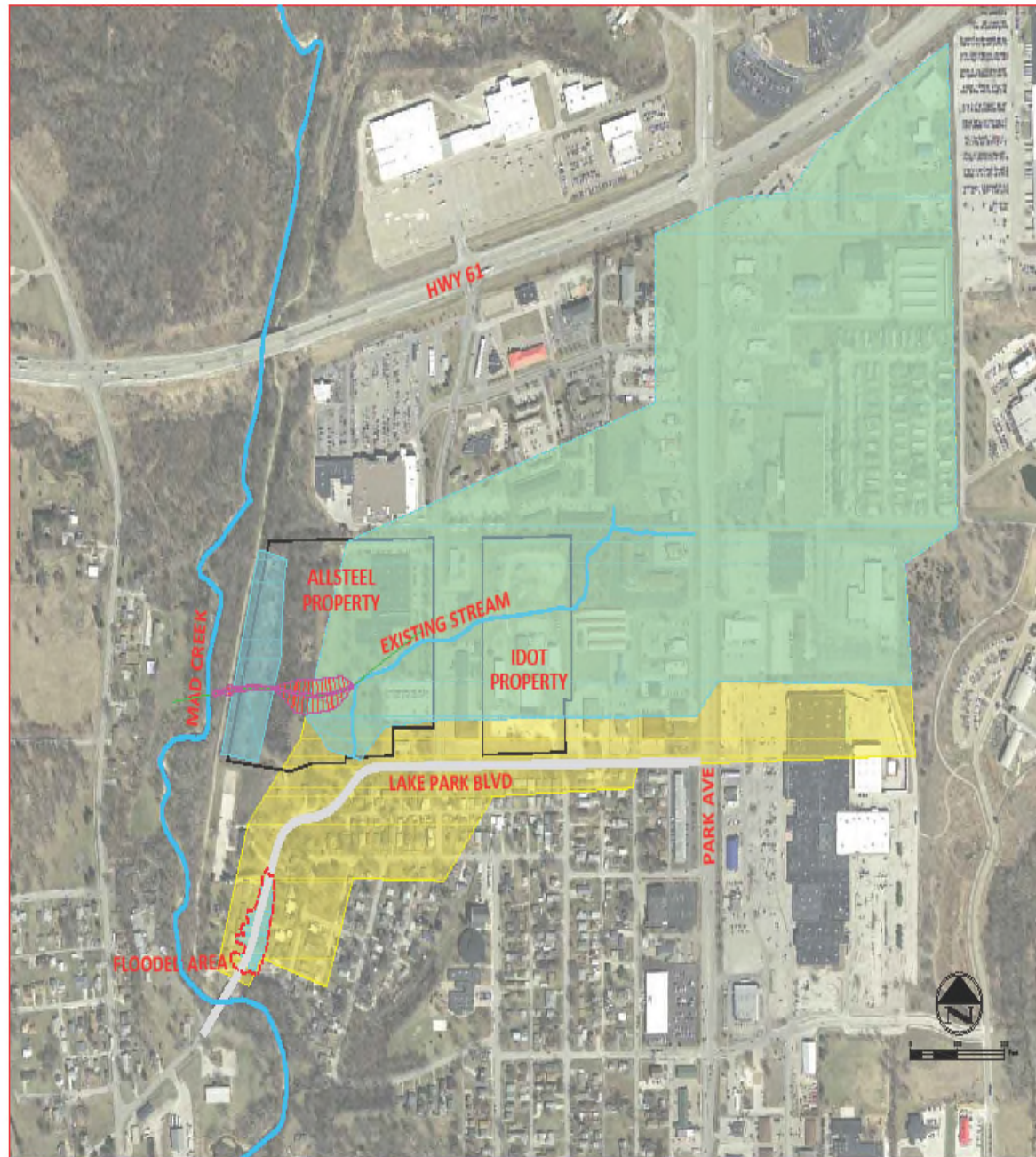
Option 4

- Acquire Property at 719, 715 & 723 AND 727
 - If going to acquire three houses, may as well acquire the fourth and create space for public use.
 - Would not prevent street flooding
 - Would eliminate flooding of properties by eliminating houses.
 - Estimated cost \$870,000



Option 5

- “Allsteel Proposal”
 - Design & construction of stormwater project on Allsteel property
 - Would prevent some water from getting to low point
 - Would not eliminate street flooding
 - Would reduce depth & duration of street flooding
 - Estimated Cost \$490,000

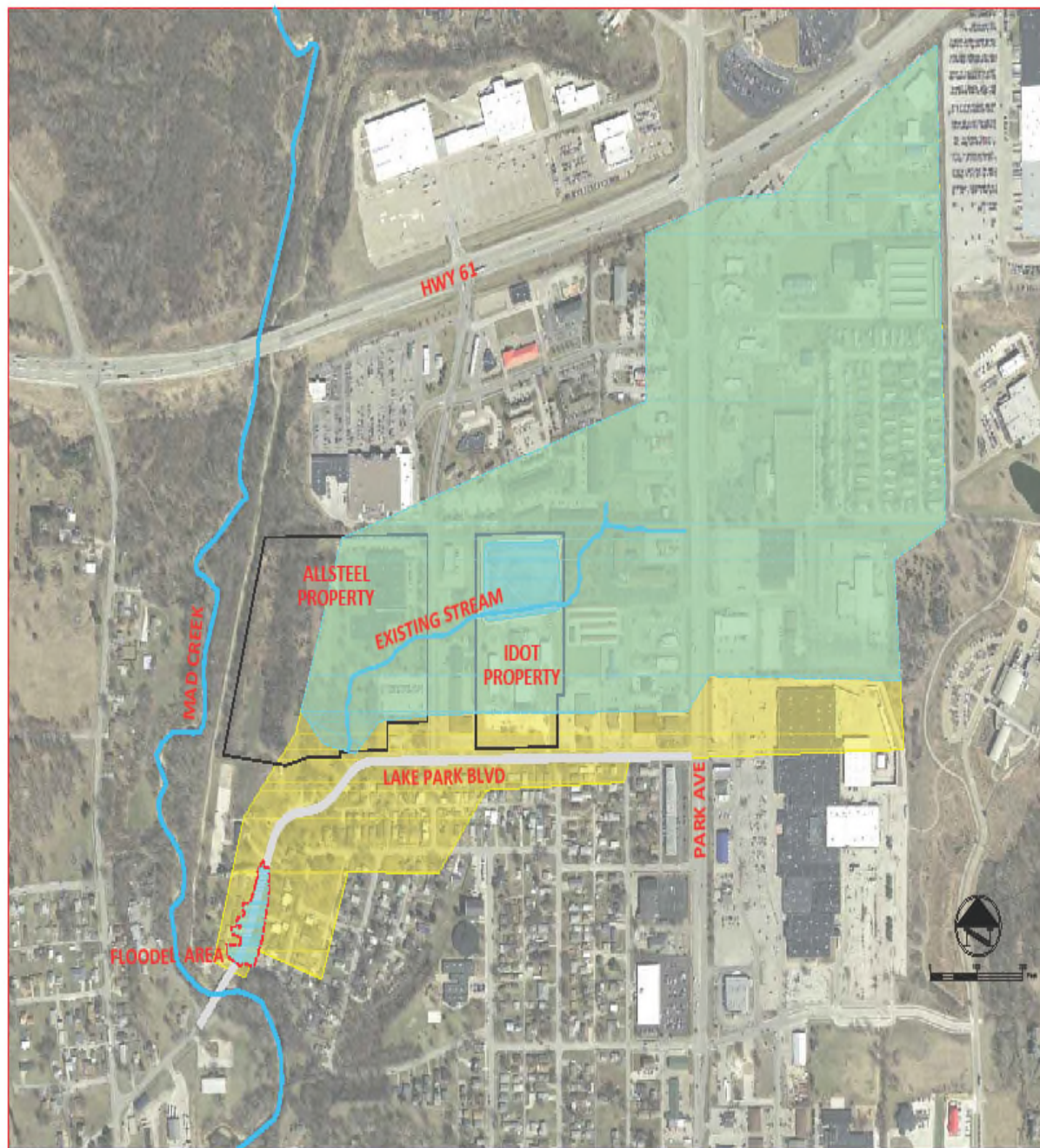


DIVERSIONARY CHANNEL:

- FLOODED AREA IS LOWER THAN EXISTING CONDITION BY ABOUT 1 FOOT AND NEVER REACHES OVERFLOW.
- FLOODED AREA STAYS FLOODED FOR ABOUT 30 MINUTES.
- APPROXIMATE PROJECT COST: \$490,000

Option 6

- DOT Detention Basin
 - Design & construction of stormwater project on former DOT property
 - Would reduce some water going to Allsteel and storm sewer on Lake Park Blvd.
 - Would not eliminate street flooding
 - Would reduce depth & duration of street flooding but not as much as Option 5
 - Estimated Cost \$350,000



DETENTION POND:

- 80 AC± UPSTREAM OF DOT PROPERTY WOULD FLOW TO POND
- FLOODED AREA STILL FLOWS OVERLAND TO MAD CREEK.
- FLOODED AREA STAYS FLOODED FOR ABOUT 4 HOURS.
- APPROXIMATE PROJECT COST: \$350,000

Option 7

- Diversion Ditch on Lake Park Blvd.
 - Design & construction of stormwater project on east side of Lake Park Blvd.
 - Would reduce some water on Lake Park Blvd.
 - Would not eliminate street flooding
 - Would reduce depth & duration of street flooding
 - Estimated Cost \$100,000



ROADSIDE DITCH:

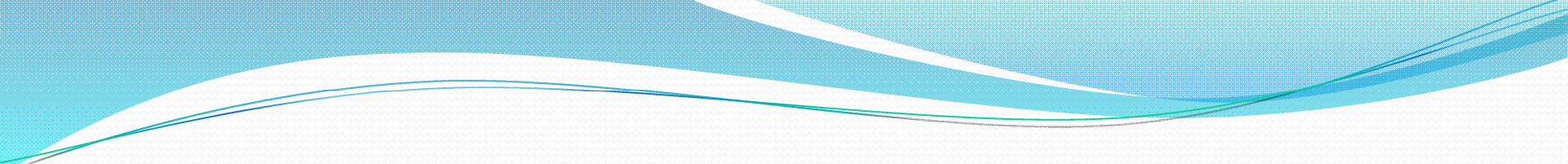
- FLOODED AREA IS THE SAME AS EXISTING CONDITION.
- FLOODED AREA STAYS FLOODED FOR ABOUT 20 MINUTES.
- APPROXIMATE PROJECT COST: \$100,000

Recommendation

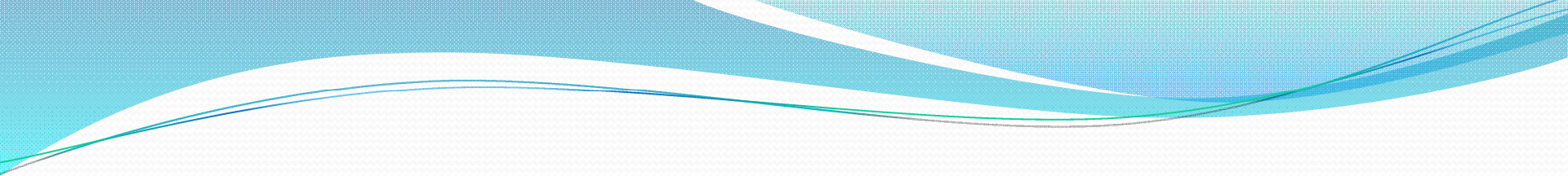
- Any combination of options will NOT prevent flooding of Lake Park Boulevard.
- Options 2-4 provide reduction in property damage because of house removal
- Options 5-7 help reduce the amount of flooding but do NOT eliminate it.
- Option 6 will be implemented on DOT property in near future.

Recommendation

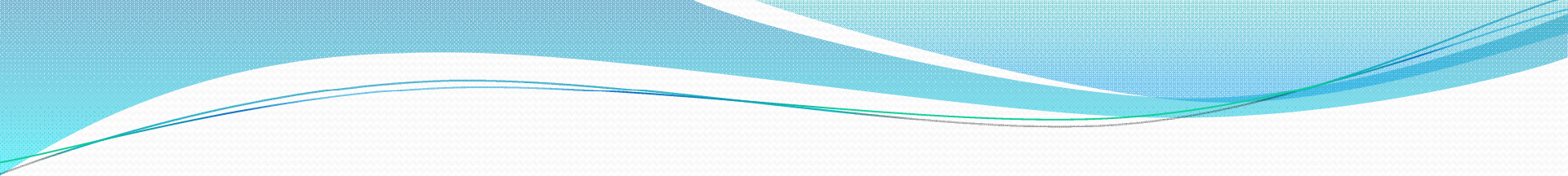
- Staff recommends Option 1



Staff understands that this is a hot button issue and our response will be judged and discussed at length. The “do nothing” approach does not solve this issue but we feel that to truly solve it requires expenditure of public funds that we cannot justify. There are pre-existing conditions in this area including the low roadway and the houses that are affected should not have been constructed where and how they were. When the buyers purchased these houses they took the responsibility for what happens to them. If the previous owners did not disclose the flooding to the new owners that is a civil matter between the private entities and the city should not be involved. We don't feel that the city should be responsible to mitigate issues that are out of our control and that the property owners should be responsible to protect their own property at their expense.



Purchasing these properties would eliminate the potential to flood the houses but we don't feel the cost for this is justified and also feel that it sets a precedent that we don't want to encourage. Projects can be designed to reduce the level of flooding on the street in this area but not eliminate it. The only way to positively eliminate water on the road is to go up the hill on Lake Park Boulevard approximately 1,000 feet and raise the road and install new storm sewer. This project would still require purchase of the houses on the west side of the street and is roughly estimated to cost between two and three million dollars. Again we can't justify this expense.



Public Works staff are willing to assist the home owners with technical information about cost-effective measures that each owner could employ to protect their homes from flooding. Public Works, in association with other departments, can also close the street with barricades to prevent vehicles from trying to drive through the flood water which will protect motorists and also remove wave action that could impact the homes and their protective measures.